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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/701,457 08/22/96 YAHATA

S 960630

023850 MM91/0313  
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EXAMINER
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ART UNIT	PAPER NUMBER
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2821  
DATE MAILED:

03/13/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**08/701,457**

Applicant(s)  
**Yahata et al**

Examiner  
**Michael Wimer**

Group Art Unit  
**2821**



☒ Responsive to communication(s) filed on 12/28/00

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-5, 8-12, 14, 15, 17-29, and 31-36 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-5, 8-12, 14, 15, 17-29, and 31-36 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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### DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wennerberg (3031667) in view of D'Hont (5408243).

Regarding Claim 1, Wennerberg shows in Fig. 1, a rectangular magnetic core 10 with the coil windings 12 wound on the core parallel to a greater rectangular dimension of the core, all arranged as claimed. D'Hont shows, for example in Fig. 7, a transponder antenna with a magnetic core composed of a single stack of rectangular metallic "thin" plates 42A-D of amorphous magnetic material (made of magnetic particles of soft iron or flakes, as claimed, within a synthetic resin) which may be oxidized (as taught in col. 4, lines 30-35) so as to be insulated as recited. No winding of the coil in a parallel direction to the long side of the rectangle appears to be taught. The windings are absent in Fig. 7. However, it would have been obvious to the skilled artisan to employ the core of D'Hont in lieu of the core 10 of Wennerberg for the purpose of providing a relatively low induction losses with higher operating frequencies as compared with soft iron.

3. Claims 1-5, 7-11, 19-29 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over D'Hont in view of Wennerberg, Spears (3,495,264) or Fujimoto et al (3,750,180).

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Regarding Claims 1,3-6,8,19,20 and 36, D'Hont shows, for example in Fig. 7, a transponder antenna with a magnetic core composed of a single stack of rectangular metallic "thin" plates 42A-D of amorphous magnetic material (made of magnetic particles of soft iron or flakes, as claimed, within a synthetic resin) which may be oxidized (as taught in col. 4, lines 30-35) so as to be insulated as recited. No winding of the coil in a parallel direction to the long side of the rectangle appears to be taught. The windings are absent in Fig. 7. Thus, the secondary references are cited showing such obviousness, where Wennerberg shows coil 12 arranged on rectangular core 10, Spears shows in Fig. 4 the coil wound about the core 21, and Fujimoto et al shows a portion of the coil between terminals 12 parallel to the long sides of the rectangular core 7. It would have been obvious to employ such a directional winding in D'Hont for the purpose of maximizing directional characteristics of a particular geometrical core antenna. Shape and winding and the direction of the winding are all obvious design considerations. As to Claims 2 and 36, badges, cards or flexible sheets (col. 1, lines 15-17) are deemed to have corners that are rounded, and reduced at any angle for the purpose of convenience. Regarding Claims 7,9-11 and 21-29, D'Hont teaches various dimensions and compositions for the elements and is evidence of obviousness that such dimensions and compositions are design expedients dependent upon a particular antenna design and efficiency in the system. The specific dimensions and compositions claimed are obvious to the skilled artisan and notice of such is hereby taken. Frequency of operation is obvious to a specific design of the skilled artisan and dependent upon frequency allocation of the particular transponder system.

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4. Claims 12,14,15,17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens et al (4,937,586) in view of Takizawa et al (4,879,570) and D'Hont.

Regarding Claims 12,14,15,17 and 18, Stevens et al show a plate transponder with a spiral, air-cored loop 46 and ferrite loop antenna 48 disposed on a common substrate 34. Only one magnetic core antenna is shown where its axis is perpendicular to the air core loop antenna 46. Thus, Takizawa et al are cited as evidence of obviousness and as resolving the level of ordinary skill in the antenna art and shows a plurality of magnetic core antennas, where at least two antennas are perpendicular to each other. It would have been obvious to the skilled artisan to pluralize the single magnetic core antenna of Stevens et al according to Takizawa et al in order to provide omnidirectional coverage. Further, it would have been obvious to employ the magnetic core antenna of D'Hont in the primary reference devices for the purpose of improving efficiency by reducing eddy currents.

5. Claims 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over D'Hont in view of Stevens et al and Takizawa et al.

As noted above, D'Hont show the claimed structure with respect to Claim 19. Stevens and Takizawa et al are cited as resolving the level of ordinary skill in the antenna art showing plural magnetic core antennas in the transponder environment.

It would have been obvious to the skilled artisan to employ the transponder arrangement of Stevens et al employing the D'Hont antenna along with an air core, spiral antenna and

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including a plurality of magnetic core antennas taught by Takizawa et al, effectively pluralizing the D'Hont antenna for system use.

MCW/(703) 305-3555/ Facsimile (703) 308-7722 or -7724/ Receptionist (703) 308-0956.

08 March 2001



Michael C. Wimer  
Primary Examiner